

What is claimed is:

1. An electric power steering device comprising:  
a motor for generating a steering assisting force;  
means for obtaining steering torque;  
means for obtaining a rotation angular speed of  
5 said motor;  
means for obtaining a steering angular acceleration  
correspondence value, which corresponds to a sum of a value  
obtained by multiplying a change acceleration of the  
steering torque by a gain and a rotation angular  
10 acceleration of said motor, according to the obtained  
steering torque and the obtained rotation angular speed of  
said motor;  
means for regulating the gain;  
means for storing relation between a motor output  
15 correction value, which is preliminarily determined in such  
a way as to compensate for the influence of the inertia on  
steering, and the steering angular acceleration  
correspondence value; and  
means for controlling said motor in such a way as  
20 to correct a steering assisting force according to the  
motor output correction value obtained according to the  
obtained steering angular acceleration correspondence value  
and the stored relation.

2. The electric power steering device according to

claim 1,

wherein a rate of increase in magnitude of the motor output correction value in a range, in which magnitude of the steering angular acceleration correspondence value is large, is set to be larger than a rate of increase in magnitude of the motor output correction value in a range, in which the magnitude of the steering angular acceleration correspondence value is small.

---

3. A method for controlling an electric power steering device, said method comprising the steps of:

obtaining steering torque;

obtaining a rotation angular speed of a motor for generating a steering assisting force;

obtaining a steering angular acceleration correspondence value, which corresponds to a sum of a value obtained by multiplying a change acceleration of the steering torque by a gain and a rotation angular acceleration of said motor, according to the obtained steering torque and the obtained rotation angular speed of said motor;

regulating the gain;

storing relation between a motor output correction value, which is preliminarily determined in such a way as to compensate for the influence of the inertia on steering,

and the steering angular acceleration correspondence value;  
and

controlling said motor in such a way as to correct  
20 a steering assisting force according to the motor output  
correction value obtained according to the obtained  
steering angular acceleration correspondence value and the  
stored relation.

---